IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered). Please AMEND claims 1-2 and 4-15, and ADD new claims 16-19 in accordance with the following:

---

1. (Currently Amended) A serial bus interface device having a function of automatically reconstructing a topology when the device is inserted or withdrawn during operation of a serial bus, comprising a physical layer circuit serving as a physical interface without being given an identification number during the operation of the serial bus after ~~when~~ the serial bus interface device is connected to the serial bus.

2. (Currently Amended) A serial bus interface device according to claim 1, further comprising a data storing unit ~~for~~ storing data on the serial bus, which is received by the physical layer circuit.

3. (Original) A serial bus interface device having a function of automatically reconstructing a topology when the device is inserted or withdrawn during operation of a serial bus, comprising a physical layer circuit serving as a physical interface to which one or more identification numbers are assigned when the serial bus interface device is connected to the serial bus.

4. (Currently Amended) A serial bus interface device according to claim 3, further comprising a data storing unit ~~for~~ storing data on the serial bus, which is received by the physical layer circuit in association with the identification number(s).

5. (Currently Amended) A serial bus interface device according to claim 2, further comprising a data condition detecting unit ~~for~~ monitoring data on the serial bus, which is received by the physical layer circuit and, when data matching a predetermined condition is detected, outputs a trigger signal,

wherein the data storing unit stores data in response to the output of the trigger signal.

6. (Currently Amended) A serial bus interface device according to claim 1, further comprising a control circuit ~~for~~ transferring data to be transmitted onto the serial bus via the physical layer circuit to the physical layer circuit.

7. (Currently Amended) A serial bus interface device according to claim 6, further comprising a transmission data storing unit ~~for~~ storing data to be transmitted.

8. (Currently Amended) A serial bus interface device according to claim 7, further comprising a data transmission condition detecting unit ~~for~~ monitoring data on the serial bus, which is received by the physical layer circuit and, when data matching a predetermined condition is detected, outputs a trigger signal,

wherein the control circuit transfers data to be transmitted which is stored in the transmission data storing unit in response to the output of the trigger signal to the physical layer circuit.

9. (Currently Amended) A serial bus interface device according to claim 1, further comprising:

a pair of communication ports; and

a converting unit ~~for~~ converting data received from the serial bus via the physical circuit,

wherein data received by one of the pair of communication ports or the converted data is transferred to the other communication port.

10. (Currently Amended) A serial bus interface device according to claim 4, further comprising:

a data condition detecting unit ~~for~~ monitoring data on the serial bus, which is received by the physical layer circuit in accordance with an identification number and, when data matching a predetermined condition is detected, outputting a trigger signal corresponding to the identification number,

wherein data is stored in the data storing unit in association with the identification number in response to the output of the trigger signal corresponding to the identification number.

A1

11. (Currently Amended) A serial bus interface device according to claim 3, further comprising a control circuit ~~for~~ transferring data to be transmitted onto the serial bus in accordance with an identification number via the physical layer circuit to the physical layer circuit.

12. (Currently Amended) A serial bus interface device according to claim 11, further comprising a transmission data storing unit ~~for~~ storing data to be transmitted according to the identification number.

13. (Currently Amended) A serial bus interface device according to claim 12, further comprising a data transmission condition detecting unit ~~for~~ monitoring data on the serial bus, which is received by the physical layer circuit in accordance with an identification number and, when data matching a predetermined condition is detected, outputting a trigger signal corresponding to the identification number,

wherein the control circuit transfers data to be transmitted according to the identification number stored in the transmission data storing unit in response to the output of the trigger signal corresponding to the identification number to the physical layer circuit.

14. (Currently Amended) A serial bus interface device according to claim 3, further comprising:

a group of communication ports according to the identification numbers; and

a converting unit ~~for~~ converting data received from the serial bus through the physical layer circuit,

wherein data received by any one of the group of communication ports or the converted data is transferred to at least one of the other communication ports.

15. (Currently Amended) A serial bus interface device according to claim 1, wherein the serial bus interface device is a bus analyzer ~~for~~ analyzing the serial bus.

16. (New) A serial bus interface device according to claim 1, wherein the identification number is not assigned to the physical layer circuit during a self-identifying operation.

17. (New) A serial bus interface device according to claim 1, wherein the physical layer circuit serves as the physical interface without being given an identification number after a self-

identifying operation.

A1

18. (New) A serial bus interface device having a function of automatically reconstructing a topology when the device is inserted or withdrawn during operation of a serial bus, comprising a physical layer circuit transmitting and receiving packets without being given an identification number after the serial bus interface device is connected to the serial bus.

19. (New) A serial bus interface device having a function of automatically reconstructing a topology when the device is inserted or withdrawn during operation of a serial bus, comprising a physical layer circuit serving as a physical interface without being given an identification number after a self-identifying operation.

20. (New) A method of simulating a plurality of identification numbers on a serial bus, the method comprising:

adding a serial bus interface device to the serial bus, wherein the device has a function of automatically reconstructing a topology when the device is inserted or withdrawn during operation of the serial bus, and

assigning a plurality of identification numbers to a physical interface of the device when the device is connected to the serial bus.